

## Curriculum Vitae

LISA A. CASSIS, Ph.D.

### I. General Information

**Home Address:** 192 Timberlane Ct.      **Telephone:** (859) 223-3121  
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Wethington Building      **Lab:** (859) 323-4933 ext 81405  
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Pharmacology/Nutritional Sciences  
900 S. Limestone  
Lexington, KY 40536-0200  
e-mail: lcassis@uky.edu

**Birthdate:** May 1, 1957

**Spouse:** Robert A. Lodder  
**Children:** R. Andrew Lodder (birthdate: 12/29/91)  
Laura Beth Lodder (birthdate: 7/15/95)

**Specialty Board:** Registered Pharmacist, West Virginia, 1980

**License Number:** 3748

### II. Education

<u>Year</u>	<u>Degree</u>	<u>Institution</u>
1980	B.S., Pharmacy	School of Pharmacy, West Virginia University, Morgantown, W.Va.
1984	Ph.D., Pharmacology Mentors: Richard Head, Ph.D. Robert Stitzel, Ph.D.	Department of Pharmacology and Toxicology, College of Medicine, West Virginia University, Morgantown, W.Va.

### III. Professional Experiences

<u>Year</u>	<u>Position</u>	<u>Institution</u>
1980-84	Staff Pharmacist	Monongahela Hospital, WV
1984-85	Alexander von Humboldt Postdoctoral Fellowship Mentor: Ullrich Trendelenburg Professor and Chairman	Department of Pharmacology, University of Wurzburg West Germany
1985-88	Postdoctoral Fellow Mentor: Michael Peach, Ph.D. Professor and Dean for Research	Department of Pharmacology, University of Virginia, Charlottesville

1988-1994	Assistant Professor	College of Pharmacy, University of Kentucky, Lexington
1994 -2000	Associate Professor	University of Kentucky, Lexington
2000-	Professor	University of Kentucky, Lexington

#### IV. Academic Appointments

<u>Year</u>	<u>Title</u>	<u>Institution</u>
1988-1994	Assistant Professor	University of Kentucky, College of Pharmacy, Division of Pharmacology and Experimental Therapeutics
1994-2000	Associate Professor	College of Pharmacy, Division of Pharmacology and Experimental Therapeutics
1998-2000	Associate Professor	College of Pharmacy, Division of Pharmaceutical Sciences
1994-2000	Associate Professor	Graduate Center for Toxicology, University of Kentucky
1998-2000	Associate Professor	Nutritional Sciences, University of Kentucky
2000 -	Professor	Division of Pharmaceutical Sciences, College of Pharmacy; Graduate Center for Toxicology; Division of Endocrinology, Internal Medicine; Nutritional Sciences, University of Kentucky
2003	Director	Graduate Center for Nutritional Sciences, University of Kentucky
2007	Chair	Graduate Center for Nutritional Sciences, College of Medicine, University of Kentucky
2012-2014	Chair	Department of Molecular and Biomedical Pharmacology, College of Medicine, University of Kentucky
2014	Chair	Department of Pharmacology and Nutritional Sciences
2014	Interim Vice President for Research	University of Kentucky
2015	Vice President for Research	University of Kentucky

#### V. Hospital or Clinical Appointments

Monongahela General Hospital, Hospital Pharmacist, part-time, 1980-84

## VI. Consulting Activity

DuPont-Merck Pharmaceuticals, Delaware, 1996 - 1998  
Professional witness in the area of pharmacology, Miller, Griffin and Marks law firm, 2000  
Medtronic, CA, 2003  
Duquesne University, Reviewer of Pharmacy Program, 2007  
University of Nebraska, Reviewer of Internal COBRE applications, 2011, 2012

## VII. Teaching Activity

1980 - 1984:	Medical school pharmacology, general pharmacology
1988 - 1993:	PHR 852: Cardiovascular, Renal and Pulmonary Pharmacotherapeutics - Course Coordinator, cardiovascular pharmacology, 45 lectures
1989 - 1992:	Cardiovascular and Pulmonary Journal Club, Course Coordinator
1992 - 1995:	PHR 851: Nervous System Pharmacotherapeutics, autonomic pharmacology, 15 lectures
1992 - 1999:	PHR 760-002: Molecular Techniques, molecular biology and recombinant DNA techniques, 4 lectures
1992 - 1998:	PHR 760-002: Molecular Pharmacology, renin angiotensin, aldosterone, and vasopressin systems, 4 lectures
1999 - 2001:	PHR 760, Topics in Pharmaceutical Sciences, 2 lectures, receptor theory
1998 - 2003:	PHR 941: Course Coordinator for Cardiovascular Pharmacotherapeutics, renin angiotensin, hypertension, cardiac arrhythmias, congestive heart failure, 35 lectures
2000 - 2003:	PHA 634, Cardiovascular Pharmacology, 4 lectures, the renin-angiotensin system
2001 - 2003:	PHR 760, Advanced Cardiovascular Pharmacology, 1 credit, course coordinator, 10 lectures
2002, 2008:	PHA 621, Advanced Principles of Drug Action, 2 lectures, Quantification of Ligand Receptor Interactions
2003	NS/CNU Nutrition and Chronic Diseases, 2 lectures, The Metabolic Syndrome
2003 - 2005:	NS601, Macronutrient Metabolism, Course coordinator, 15 lectures
2004 :	PHR 760-008, Drug Targets and Actions, 4 lectures
2004 :	NS607, Food Related Behaviors, 1/3rd of course
2005 - 2008:	NS701, Nutrition and Chronic Disease, Course coordinator, 15 lectures
2007 - :	NS601, Macronutrient Metabolism, 4 lectures
2009 - 2012:	NS602, Micronutrient Metabolism, 2 lectures

- 2009 - 2011: NS771, Graduate Seminar, Course Coordinator  
2011,12 : MD825, Nutrition for Physicians 2, Course  
Coordinator  
2014 : IBS608 minicourse, Nutrition and Hypertension, 1 lecture  
2014 - 2015: PHA622, Advanced Pharmacology, the renin-angiotensin system,  
4 lectures

## VIII. Advising Activity

### Undergraduate Students:

- 1988 - 1989: Cindy Stowe (recipient of Upjohn Research Award, Rho Chi Research Award)  
1989 - 1990: Cynthia Osborne (recipient of Pharmacology Award)  
1990 - 1991: Alison Summers (recipient of Rho Chi Research Award)  
1990 - 1991: Stewart Shannon  
1989 - 1991: Douglas Parrish (recipient of Upjohn Research Award)  
1991 - 1992: Richard Hayden  
1992 - 1993: Joanna Gibb  
1992 - 1993: Ann Marie Bercaw  
1992 - 1994: Douglas Joyce (recipient of Upjohn Research Award, American Association of Colleges of Pharmacy Undergraduate Research Award)  
1993 - 1994: Todd Price  
1994 - 1995: Julie Yates (recipient of Howard Hughes undergraduate research award)  
1994 - 1995: Ann Tran  
1995 - 1995: Jerry Dyer (recipient of Howard Hughes Undergraduate research award)  
1996: Erica Murrell (recipient of Howard Hughes Undergraduate research award)  
1996: Dana Marshall (recipient of Howard Hughes Undergraduate research award)  
1996: Brent Ferguson (recipient of Howard Hughes summer high school teacher research initiative)  
1997: Amy Laughter (recipient of Howard Hughes summer high school teacher research initiative)  
2000: Kathy Heid, undergraduate at Asbury College  
2000: Crystal Cox, undergraduate at UK, independent study  
2001: Delana Hopkins, AHA summer fellowship  
2001: Erin Burke, Pharmaceutical Sciences Summer Fellowship  
2001: Jennifer Delago, Graduate Center for Toxicology Summer Fellowship  
2002: Delana Hopkins, AHA summer fellowship  
2002: Tania Barreras, Graduate Center for Toxicology Summer Fellowship  
2003: Stephanie Stolberg, Graduate Center for Toxicology Summer Fellowship  
2005: Kavita Traveti, Kentucky Undergraduate Summer Fellow  
2006: Sarah Thayer, Ag Biotech (recipient of an AHA summer fellowship)  
2007: Annie Nsafoah, Ag Biotech  
2007, 2008: Erika Namay, Ag Biotech  
2008: Charlotte Walter, Medical Student  
2009: Paul Cassis, biology major  
2009: Janelle Geddes, ARRA undergraduate research supplement  
2010: Haddijatou Bayo, ARRA undergraduate research supplement  
2010, 2011: Tamyah Pipkin, high school student, STEP-UP NIH Program,  
NIDDK 2011: Stephen Bishop, ARRA undergraduate research supplement  
2011: Andrew Cassis, biology major  
2012: Tom Gardner, Kentucky State University  
2013: Grisselle Martinez, University of Puerto Rico  
2014-15: Shannon Woody, University of Kentucky (1<sup>st</sup> place winner, Ag-Biotech research presentations)  
2018: Jenny Liang, University of Kentucky  
2019: Jenny Liang, University of Kentucky, recipient of AHA undergraduate

2019 research fellowship  
Nicole Bacha, University of Kentucky (1<sup>st</sup> place winner, Ag-Biotech research presentations)

**Undergraduate Advisor:**

1989 - 1994: Rho Chi Pharmacy Honor Society

**Graduate Student Advisor:**

Major Advisor:

1992 - 1995: Ujjwala Samant (Ph.D., Pharmaceutical Sciences)  
1995 - 1999: Vicky King (Ph.D., recipient of NIH NRSA predoctoral fellowship, Pharmaceutical Sciences)  
1995 - 1998: Scott Akers (Ph.D., recipient of AFPE predoctoral fellowship; Department of Pharmaceutical Sciences)  
1996 - 1998: Brady Rosenbluth (M.S., Department of Pharmaceutical Sciences) 1997 - 2004 Gerome Burke (Ph.D., recipient of NIH NRSA predoctoral fellowship; Graduate Center for Toxicology)  
2001 - 2004 Carine Boustany, Ph.D., 2<sup>nd</sup> place recipient of Gill Heart Research Award, 2002, recipient of AHA predoctoral fellowship; Department of Pharmaceutical Sciences  
2002 - 2006 Kalyani Bharadwaj, Ph.D., recipient of ATVB travel award, 2003, recipient of AHA predoctoral fellowship ship award; Department of Pharmaceutical Sciences  
2002 - 2005 Tracy Henriques, Ph.D., 1<sup>st</sup> place recipient of Gill Heart Research Award, 2002; recipient of AHA predoctoral fellowship; Graduate Center for Toxicology  
2004 - 2008 Sara Police, Ph.D., recipient of ATVB travel award, 2005; recipient of AHA predoctoral award; recipient of USDA Predoctoral Fellowship award; Graduate Center for Nutritional Sciences  
2005 - 2010 Manisha Gupte, Ph.D., 1<sup>st</sup> place recipient of Gill Heart Research Award, 2007; recipient of AHA predoctoral award, Graduate Center for Nutritional Sciences  
2005- 2010 Xuan Zhang, Ph.D., 4<sup>th</sup> place recipient of CV Research Day Award, 2009; 1<sup>st</sup> place recipient of Angiogenesis Research Day Award; recipient of AHA predoctoral award, Graduate Center for Toxicology  
2008- 2012 Kelly Putnam, recipient of cardiovascular training grant fellowship; recipient of 2<sup>nd</sup> place student award for CV research day, 2010, recipient of AHA predoctoral award, Graduate Center for Nutritional Sciences, recipient of Angiotensin Gordon Conference Travel Award, 2012  
2009- 2011 Madhura Parulkar, Graduate Center for Nutritional Sciences  
2009- 2013 Nicky Baker, Graduate Center for Nutritional Sciences, recipient of nutritional sciences training grant fellowship, 3<sup>rd</sup> place recipient Barnstable Brown Diabetes Obesity Research Day, NIEHS Karen Wetterhan Excellence in Superfund Research Award, 2013  
2010-2015 Robin Shoemaker, Graduate Center for Nutritional Sciences, recipient of AHA predoctoral award, 2<sup>nd</sup> place recipient Barnstable Brown Diabetes Obesity Research Day, 1<sup>st</sup> place recipient Barnstable Brown Diabetes Obesity Research Day, 2014 AHA Council for High Blood Pressure Research Travel Award  
2012-2016 Yu Wang, Graduate Center for Nutritional Sciences, 1<sup>st</sup> place recipient Barnstable Brown Diabetes Obesity Research Day, 2<sup>nd</sup> place recipient, Barnstable Brown Diabetes Obesity Research Day, UK Graduate School Fellowship, American Heart Association Predoctoral Fellowship  
2013-2017 Yasir Alsiraj, Department of Molecular and Biomedical Pharmacology, American Heart Association Predoctoral Fellowship, 2<sup>nd</sup> place recipient, Barnstable Brown Diabetes Obesity Research Day, Travel Award (ATVB), Travel Award (OSSD), First place Cardiovascular Research Day Poster Graduate Student Competition  
2015-2019 Nika Larian, 2<sup>nd</sup> place recipient (staff), Barnstable Brown Diabetes Obesity Research Day, Reidy Graduate Scholarship, NIH T32 Training Program Fellow, Biomedical Graduate Research Fellow

Co-advisor:

1998 - 2001: Bruce Waldrop  
1998 - 2000: Stephen Phipps  
2009 - 2010: Tao Tang

**Graduate Student Committees:**

1988 - 1991: Cheryl Haven  
1988 - 1991: Schwan Aziz  
1989 - 1991: Yadong Zho  
1989 - 1992: Robert Mansfield  
1989 - 1992: Jeffrey Hughes  
1989 - 1993: Steve Toler  
1992 - 1994: Anjali Vyas  
1992 - 1994: Kevin Harrod  
1992 - 1994: Brenda Cronise  
1993 - 1995: Chiung-Ying Huang  
1993 - 1995: Ruihau Chen  
1993 - 1994: Karen Pirc (M.S., Graduate Center for Toxicology) 1994 -  
1997: Yue Zhang  
1994 - 1998: Robert Buice  
1995 - 2001: Lincoln Wilkins  
1995 - 1997: LiHong Peng  
1996 - 2000: Stephen Phipps (co-advisor)  
1996 - 2001: Bruce Waldrop (co-advisor)  
1999 - 2001: Amy Johnson  
1999 - 2002: Michael Manning (Department of Physiology) 1999 -  
2003 Lisa Ringelberg  
2000 - 2001: Eric Kilpatrick (Department of Physiology)  
2000 - 2003: Dan Chaloworth (Department of Pharmacology) 2002 -  
2005: Lu-Chin Lien (Graduate Center for Toxicology) 2002 -  
2005: Jing Huang (Graduate Center for Toxicology)  
2002 - 2006: Darshini Travedi (Department of Pharmaceutical Sciences) 2004 -  
2006: Marcie Cole, (Graduate Center for Nutritional Sciences) 2004 -  
2008: Phillip Owens (Graduate Center for Toxicology)  
2004 - 2008: Wei Fei (Graduate Center for Nutritional Sciences) 2007 -  
2008: Jill Cholewa (Graduate Center for Nutritional Sciences) 2007 -  
2010: Xia Li (Graduate Center for Nutritional Sciences)  
2007 - 2009: Tao Tang (Graduate Center for Nutritional Sciences) 2007  
: Vidya Narayanaswami (Pharmaceutical Sciences) 2007 -  
2010: Megan Bardgett (Physiology)  
2008 - 2011: Jingjing Liu (Pharmaceutical Sciences)  
2007 - 2009: Melissa Zack (Graduate Center for Nutritional Sciences) 2008 -  
2012: Nicholas Hatch (Graduate Center for Nutritional Sciences)  
2008 - 2010: Akin Akinmusire (M.S., Graduate Center for Nutritional Sciences) 2008 -  
2010: Violeta Arsenescu (Graduate Center for Nutritional Sciences) 2008 :  
Amy Calderon (Molecular Pharmacology)  
2008 : Mingming Zhao (Graduate Center for Nutritional Sciences) 2009  
: Sucharita Sen (Pharmaceutical Sciences)  
2010 - 2010: Candice Thomas (Graduate Center for Nutritional Sciences) 2010  
: Susan Oyen (Graduate Center for Toxicology)  
2011 : Thy Nguyen (Chemistry/Physics) 2011  
: Brittney Metts (Chemistry/Physics)  
2011 - 2014: Katryn Eske (Graduate Center for Nutritional Sciences) 2011 -  
2015: Maggie Murphy (Graduate Center for Nutritional Sciences) 2011  
: Kyung Sik Jung (Graduate Center for Toxicology)  
2009 - 2014: Congqing Wu (Graduate Center for Nutritional Sciences) 2011 -  
2015: Cetawayo Rashid (Graduate Center for Nutritional Sciences) 2012  
: Jing Liu (Graduate Center for Nutritional Sciences)  
2013 - 2016: Jarrod Williams, Department of Pharmaceutical Sciences (College of  
Pharmacy)  
2013 : Tianfei Hou (Graduate Center for Nutritional Sciences) 2013 -  
2016: Heather Norman (Graduate Center for Nutritional Sciences)  
2019 : Madeline Stewart (Graduate Center for Nutritional  
Sciences)

**Postdoctoral Fellows:**

2004 -2007: Violeta Arsenescu, M.D.  
2005 -2006: Carine Boustany, Ph.D.  
2006 -2007: Kalyani Bharadwaj, Ph.D.  
2007-2015: Sean Thatcher, Ph.D., recipient of NIH F32 postdoctoral fellowship; 1<sup>st</sup>  
place recipient of CV research day award, 2008, 2009, Gordon Research Conference New

Investigator Award, 2012

2007-2015: Frederique Yiannikouris, Ph.D., 3<sup>rd</sup> place recipient of CV research day award, 2009; 2<sup>nd</sup> place recipient of CV research day award, 2010; NIH T32 Postdoctoral Fellow; 1<sup>st</sup> place award Obesity/Diabetes Research Day, AHA SDG Award  
2011-2012: Xuan Zhang, PhD  
2015-2018: Robin Shoemaker, PhD, recipient of AHA postdoctoral fellowship  
2015-2018: Erin Jackson, PhD  
2018 Yasir AlSiraj, PhD, AHA postdoctoral fellow  
2019 Nika Larian, PhD

**Research Assistant Professor:**

2009/2010 Kamilah Ali, PhD.  
2012- Sean Thatcher, PhD.  
2013-2015 Frederique Yiannikouris, PhD

**IX. Administrative Activity and University Service**

**College of Pharmacy Committees:**

1988 - 1989 Ad Hoc Pharm. D. Curriculum Committee  
1989 - 1990 Continuing Education  
1990 Library Services Self Study Committee  
1990 - 1994 Curriculum Committee  
1993 - 1994 Research and Seminar Committee  
1994 - 1996 Admissions Committee  
1995 - 1998 Graduate Program Committee  
1998 Search Committee for faculty member in Pharmaceutical Science, Chair  
1998 - 1999 Elected Executive Committee, Division of Pharmaceutical Sciences  
1998 - 1999 Executive Committee, College of Pharmacy  
1998 - 1999 Vice Chair, Division of Pharmaceutical Sciences  
1999 Research and Seminar Committee  
2000 - 2001 Appointment, Promotion and Tenure Committee  
2000 - 2001 Honors and Recognition Committee  
2001 Search Committee, Pharmaceutics position  
2000 - 2001 Molecular, Cellular and Integrative Pharmacology Coordinator for the Division of Pharmaceutical Science  
2000 - 2001 Graduate Program Committee, Division of Pharmaceutical Sciences  
2002 Search Committee, Molecular and Cellular Pharmacologist  
2003 Admissions Committee, College of Pharmacy  
2003 Assessment Sub-committee of the Curriculum Committee  
2003 ACPE Self Study Sub-committee, Chair, Faculty Committee  
2003 Departmentalization Committee, College of Pharmacy

**Graduate Center for Nutritional Sciences**

2004 Search Committee Chair, Faculty position  
2005 Search Committee Chair, Faculty position  
2008 Search Committee Chair, Faculty position  
2009 Search Committee Chair, Faculty position

**College of Medicine**

2008 - 2013 MD/PhD Admissions Committee  
2011 - 2013 Biomedical Sciences Executive Committee  
2003 - Cardiovascular Research Center Steering Committee  
2010 - Barnstable Brown Diabetes and Obesity Center Executive Committee  
2015 - REACH Mentoring Steering Committee

**University Committees:**

1989 Performance Evaluation, College of Nursing  
1989 - 1991 Alternate, Academic Council for the Medical Center  
1992 - 1998 Howard Hughes Biomedical Undergraduate Research Initiative

1997 - 1999	Tobacco and Health Research Advisory Group
1998 - 2000	Graduate Council Committee on Fellowships and Traineeships
1997 - 2001	Gill Heart Institute, Research Advisory Committee
1999 -	Graduate Center for Toxicology, Admissions Committee
1999 - 2004	Institutional Animal Care and Use Committee, University of Kentucky
2003	Search Committee, Director of Women's Health Center
2007 - 2010	Graduate Council Committee on Fellowships

## X. Special Assignments

### University Assignments:

1992 - 1998	Kentucky Drug Equine Research Council, University of Kentucky representative
1996 - 1997	<b>Co-Chair</b> , Task Force for Reorganization of the College of Pharmacy
1997	<b>Chair</b> , Search Committee, Division of Pharmacology and Experimental Therapeutics
1999	<b>Chair</b> , Tobacco and Health Research Advisory Committee
2004, 2005	<b>Chair</b> , Task Force, Master's Programs in Nutritional Sciences
2009 - 2010	<b>Organizer</b> of Research Experiences for Mini-Medical School for State Legislators
2001-	<b>Organizer</b> , Obesity/Diabetes Research Day, University of Kentucky (255 registrants, 80 poster presentations)
2013 - 2014	<b>Co-Chair</b> , UK Strategic Planning Committee on Research
2014 - 2015	<b>Interim</b> Vice President for Research, University of Kentucky

### National Assignments:

1994 - 1997	National American Heart Association Affiliate Study Group G, Reviewer
1996 - 1999	National American Heart Association, Study Section Reviewer, Cardiovascular Regulation, <b>Co-Chair</b> , 1999
1996	Tele-conference Review, NIH Pharmacology Study Section, General Medicine
1996 - 1997	Ad-hoc NIH Reviewer, Pharmacology Study Section, General Medicine
1997	Tele-conference Review, NIH Pharmacology Study Section, General Medicine
2000	Ad-hoc Reviewer, NIH General Medicine Special Emphasis Panel
1997 - 2001	Pharmacology study section, Regular Member, General Medicine, NIH
2001 - 2004	National American Heart Association, Study Section Review, Cardiovascular Regulation
2001	National Science Foundation, Reviewer

2001 - 2003 American Society of Pharmacology and Experimental Therapeutics, Workshop committee

2002 NIH Reviewer, Special Emphasis Panel, Tele-conference Review, Ad-hoc written reviewer

2003 NIH, Special Emphasis Panel, Role of Sleep and Sleep Disordered Breathing in the Metabolic Syndrome

2003 American Heart Association National, Co-Chair, Cardiovascular Regulation Study Section

2004 American Heart Association, Ohio Valley Affiliate, Cardiovascular Regulation

2004 NIH, Ad-hoc reviewer, November, February 2003/2004, Pathobiology of Kidney Disease

2004 NIH, Special Emphasis Panel, December, 2004, Pathobiology of Kidney Disease

2005 NIH, MBRS Reviews

2005 NIH, PPG Reviewer

2006 NIH, Teleconference Reviewer

2006 NIH, Special Emphasis Panel, Obesity and Sleep Disorders

2006 American Heart Association, Ohio Valley Affiliate, Cardiovascular Regulation

2008-2011 American Heart Association, Ohio Valley Affiliate, Cardiovascular Regulation/Vascular Biology of Blood Pressure

2008 NIH, Working Group, Target Organ Damage in Hypertension

2008 Fall Conference Committee, American Heart Association Council for High Blood Pressure Research

2008-2009 NIH K99 Review Panel

2009 NIH Study Section, Atherosclerosis, Ad hoc Reviewer, ARRA Challenge Grants Reviewer

2009 Special Emphasis Panel, NIH, Chair

2009 NIH Program Project Review

2010 American Heart Association, High Blood Pressure Council, Nutrition Liaison

2010 American Heart Association, High Blood Pressure Council Leadership Committee

2009-2012 NIH NCRR IDEA Steering Committee

2010 NIH Vascular Cell Biology Study Section, ad-hoc reviewer

2010 NIH Program Project Grant Reviewer

2011 American Heart Association Grant Reviewer  
2011-2017 Charter member, Vascular Cell and Molecular Biology Study Section, NIH  
2012 NIH Special Emphasis Panel, Gender and Diversity Panel  
2012 Steering Committee, Angiotensin Gordon Research Conference  
2013 NIH Program Project Review  
2013/14 SEC Symposia Representative, University of Kentucky  
2015 NIH K Award Conference, Presenter and Mentor in Review  
2015 NIH COBRE Phase 3 Review Panel  
2016 NIH Program Project Review  
2016 NIH HLBI Loan Payment Program Review  
2017 NIH Special Emphasis Panel  
2017 NIH HLBI Loan Payment Program Review  
2019 NIH COBRE Panel Phase 2 Panel Review  
2019 NIH HLBI Loan Payment Program Review

## **XI.**

### **Honors**

2018 Distinguished Professor Lectureship, Augusta Regents Department of Physiology  
2014 Centennial Hall of Fame Graduate, School of Pharmacy, West Virginia University  
2012 Nicki Baker (graduate student), NIEHS Karen Wetterhan Research Award  
2012 Harriett Dustan Award for Excellence by a Female Scientist in Hypertension Research, American Heart Association Council for High Blood Pressure Research  
2012 Mentor of Women Awardee, Council on Arteriosclerosis Thrombosis and Vascular Biology, American Heart Association  
2010-12 NIH College of Grant Reviewers  
2009 Robert E. Stitzel Distinguished Lecture, West Virginia University School of Medicine  
2003 Outstanding Professor Award, College of Pharmacy, University of Kentucky  
1984 First Place Sigma Xi Research Colloquium  
1984 Colloquium First Place Winner Van Liere Graduate Student Research  
1983 ASPET Student Travel Award  
1983 Pharmacology Graduate Student Representative

- 1983 Basic Sciences Graduate Student Representative  
1981 Benedum Foundation Graduate School Academic Scholarship  
1978 West Virginia University Undergraduate Academic Scholarship

## **XII. Professional Activity and Public Service**

### **A. Professional Organizations**

- 2009 Member, American Physiological Society  
2003 - Member, American Society of Nutrition  
1997 - Member, American Society for Pharmacology and Experimental Therapeutics  
1988 - Member, American Heart Association Council for High Blood Pressure Research, Atherosclerosis Thrombosis and Vascular Biology Council, Nutrition Council  
1989 - Member, Sigma Xi  
1991 - Member, Rho Chi  
1991 - Member, National Association for the Study of Obesity  
1991 - 1999 Member, Neuroscience, Local Chapter  
1992 - 1999 Kentucky Research Equine Advisory Board

### **B. Journal Referee**

*American Journal of Physiology, Journal of Pharmacology and Experimental Therapeutics, Hypertension, British Journal of Pharmacology, Circulation Research, Brain Research, Canadian Journal of Physiology and Pharmacology, Arteriosclerosis Thrombosis and Vascular Biology, Circulation, Journal of Clinical Investigation*

**Associate Editor:** *Gender Medicine* (Nutrition Section)

**Editorial Board:** *American Journal of Physiology: Integrative, Regulative and Comparative Physiology, Adipocyte, Arteriosclerosis, Thrombosis, and Vascular Biology*

### **C. Public Service:**

- 1999 - Sunday school teacher, grades 1-2, 4-5.  
2001 - 4H Club Representative, Rosenwald Dunbar Elementary school  
2000 - Parish Council, St. Andrew's Orthodox Church  
2002- 2005 Sunday School Superintendent, St. Andrew's Orthodox Church

### XIII. Speaking Engagements

#### Local:

<u>Year</u>	<u>Organization</u>	<u>Title</u>
1991	Department of Anatomy, UK	Brown Adipose Tissue Renin-Angiotensin System
1991	Department of Pharmacology, UK	A d i p o s e A n g i o t e n s i n System
1991	Graduate Center for Toxicology, UK	Renin-angiotensin System in Animal models of Pulmonary Hypertension and Diabetes
1994	Graduate Center for Toxicology,	The Adipose Renin-angiotensin system
1994	Clinical Nutrition program	The Renin-angiotensin system obesity
1998	Division of Medicinal Chemistry	Angiotensin, Leptin, and the Regulation of Body Weight
1998	Gill Heart Institute	Interactions between Angiotensin II and the Sympathetic Nervous System in Congestive Heart Failure
1998	Graduate Center for Toxicology	Mechanisms for Angiotensin II Regulation of Body Weight
1999	Lambda Kappa Sigma, Professional Pharmacy Sorority	Cardiovascular Disease in Women
1999	Nutritional Science	Mechanisms for Angiotensin II Regulation of Body Weight
2000	Department of Physiology	The Adipose Renin-Angiotensin System
2000	College of Pharmacy	Angiotensin II: Drug discovery for the treatment of atherosclerosis and aneurysms
2001	Nutritional Science	Mechanisms for Angiotensin II Regulation of Leptin
2001	College of Pharmacy	Mechanisms for Angiotensin II Regulation of Body Weight
2002	Nutritional Science	Structure and Function of Adipose Tissue
2002	Department of Pharmacology	Angiotensin: A Vascular Toxin
2002	Gill Heart Cardiovascular Seminar Series	Angiotensin: A link between obesity and hypertension

2004	Continuing Education	Mechanisms for Obesity-Hypertension
2005	Symposia on Nutrition and Oxidative Stress	Obesity: Role of Inflammation and Oxidative Stress
2006	Department of Physiology	Androgen regulation of angiotensin-induced aneurysms
2006	Department of Pharmacology	Angiotensin as a link between obesity and cardiovascular disease
2008	Graduate Center for Toxicology	Polychlorinated biphenyls, obesity and angiotensin II-induced vascular disease
2009	Cardiovascular Seminar Series	Risk factors for abdominal aortic aneurysms: lessons learned from an experimental model
2009	Dean's Distinguished Lecture Series	The renin-angiotensin system in cardiovascular disease
2010	Cardiology Grand Rounds, UK	Angiotensin: A link between obesity and cardiovascular diseases
2013	Department of Pharmacology	The Renin-Angiotensin System in Metabolic Diseases
2014	Pharmacology, CV Research Center	Go Red for Women, Podium speaker
2015	Postdoctoral Committee	Featured Speaker/Mentor
<b>State:</b>		
1991	Chronic Disease Conference Louisville, KY	Obesity and Hypertension
2010	Division of Cardiology Louisville, KY	Angiotensin: a link between obesity and cardiovascular diseases
2011	IdEA Meeting, Louisville, KY	Center of Biomedical Research Excellence on Obesity and Cardiovascular Disease
<b>National:</b>		
1988	Council for High Blood Pressure Research	Regulation of Angiotensinogen Messenger RNA
1988	University of Florida, Department of Physiology	Location and Regulation of Angiotensinogen Messenger RNA
1988	George Washington University	Location and Regulation of Angiotensinogen Messenger RNA
1989	Federation of American Society for Experimental Biology	Angiotensinogen Messenger RNA Levels in Streptozotocin-Induced Diabetic Rats
1990	Federation of American Society	Regulation of Angiotensinogen

	for Experimental Biology	Production by Adipose Tissue
1991	E.I. DuPont de Nemours & Co. Wilmington, DE	Angiotensin in Pulmonary Hypertension
1991	Pharmacy Midwest Symposium Merrillville, IN	Academic Career Options
1992	Pharmacy Midwest Symposium Merrillville, IN	Academic Career Options
1992	West Virginia University, Dept. of Pharmacology Morgantown, WV	Brown Adipose Renin- Angiotensin System
1994	Ohio State University, College of Pharmacy Columbus, Ohio	Angiotensin in Adipose Tissue
1994	Pharmacy Midwest Symposium Merrillville, IN	Academic Career Options
1996	National Association For the study of Obesity	Angiotensin II and Regulation of Body Weight
1997	DuPont-Merck Pharmaceuticals	Infrared/Near Infrared Imaging for the Measurement of Peripheral Energy Expenditure
1998	DuPont-Merck Pharmaceuticals	Infrared/Near Infrared Imaging for the Measurement of Peripheral Energy Expenditure
1999	New York Academy of Science	Inter-relationships between the renin- angiotensin system, obesity, and atherosclerosis
1999	Minority Research Symposium NIH	Inter-relationships between hypertension and atherosclerosis
2000	National American Heart Assoc	Role of Adipocyte Renin-Angiotensin System in Adipocyte Regulation
2001	Texas Tech School of Pharmacy	Angiotensin II in Cardiovascular and Metabolic Disease
2001	Experimental Biology	Angiotensin Regulates Leptin Secretion: A Potential Link Between Obesity and Hypertension
2001	NIH Workshop	The Renin-Angiotensin System in Adipose Tissue
2001	University of Iowa	The Adipose Renin-Angiotensin System
2004	Gordon Research Conference	Gender Differences in Angiotensin- induced Vascular Disease
2004	Southeastern Pharmacology Soc.	Mechanisms of abdominal aortic aneurysms

2005	Virginia Tech	Obesity and cardiovascular disease
2005	Council for High Blood Pressure	Angiotensin in Obesity Hypertension
2006	Auburn University	Angiotensin and Vascular Disease
2006	Renal Week	Gender Differences in AngII-induced Aneurysm Formation
2007	IASH/COSEC	Angiotensin and Adipose Tissue
2007	UTSW	Angiotensin and Vascular Disease
2008	Experimental Biology	Angiotensin, Inflammation and Vascular Disease
2008	Wright State University	Angiotensin and Vascular Disease
2008	University of Iowa	PCBs, Adipocytes and Vascular Disease
2008	Medical College of Georgia	Angiotensin II-Induced Vascular Disease
2008	Eastern Virginia Medical School	Angiotensin: A Link Between Obesity and Cardiovascular Disease
2009	University of Iowa	Angiotensin: A Link Between Obesity and Cardiovascular Disease
2009	West Virginia University	The Renin-Angiotensin System and Cardiovascular Diseases
2010	American Society of Hypertension	Adipocyte Renin-angiotensin System
2010	International Society of Hypertension	Adipocyte Renin-Angiotensin System
2011	New York Medical College	The Renin-Angiotensin System in Obesity and Vascular Diseases
2011	Boston University, Whitaker	The Renin-Angiotensin System in Obesity and Vascular Diseases
2011	Wake Forest	Angiotensin in Metabolic and Vascular Disease
2011	West Virginia University	Angiotensin in Metabolic and Vascular Disease
2011	Southeast Lipid Conference	The adipocyte renin-angiotensin system
2012	Texas A&M University	Angiotensin in Vascular Disease
2012	University of Arkansas	Angiotensin in metabolic and vascular diseases
2012	Experimental Biology	The Perivascular Renin-Angiotensin System, The Renin-angiotensin System in Obesity and Cardiovascular Diseases

2012	Southeast Lipid Conference	Polychlorinated biphenyls and type 2 diabetes
2012	Georgia Regents University	ACE2 in metabolic and vascular diseases
2012	Council for High Blood Pressure Research	The renin-angiotensin system in metabolic and vascular diseases
2012	University of Iowa	Polychlorinated biphenyls and metabolic diseases
2012	Tulane University	Angiotensin in metabolic and vascular diseases
2012	Institute of Medicine	PCBs and type 2 diabetes
2013	University of Wisconsin	Angiotensin and Vascular Diseases
2014	Temple University	Angiotensin and Vascular Diseases
2014	Nutrition Research Institute, UNC	Mechanisms linking obesity to associated diseases
2014	PCB Workshop	Polychlorinated biphenyls and type 2 diabetes
2014	University of North Dakota	Angiotensin and Vascular Diseases
2015	American Society for Hypertension	Adipokines
2015	Tufts University	The renin-angiotensin system in metabolic and vascular diseases
2015	American Heart Association	Targeting the adipose renin-angiotensin system to treat obesity-associated diseases
2016	University of Memphis	The renin-angiotensin system in metabolic and vascular diseases
2016	American Heart Association	The adipocyte renin-angiotensin in cardiovascular diseases
2017	University of Nebraska	The renin-angiotensin system as a link between obesity and hypertension
2017	Experimental Biology	Sex differences in obesity-induced hypertension
2018	Wake Forest University	Sex differences in obesity-hypertension
2018	American Physiological Society	Sex differences in atherosclerosis
2019	University of Wisconsin	Sex differences in vascular diseases
2019	American Heart Association	Sex differences in vascular diseases
<b>International:</b>		
1989	3 <sup>rd</sup> International Symposium on Adenosine	ATP Induced Relaxation in Rabbit Femoral Artery: Role of the Endothelium and Cyclic Nucleotides

1991	International Catecholamine Symposia, West Germany	Presynaptic Neuromodulation of Neurotransmitter Release by Endogenous Angiotensin II
		Effects of AT1 and AT2
2000	International Symposium on Angiotensin II Antagonism, London	Antagonism on AngII Induced Atherosclerosis and Abdominal Aortic Aneurysms
2000	Queen's Medical College Nottingham, England	Mechanisms for Angiotensin II Regulation of Body Weight
2006	PCB Workshop Zakopane, Poland	Impact of Obesity on PCB Toxicity
2008	Vasoactive Peptide Symposia Bel Horizonte, Brazil	Angiotensin, Inflammation and Vascular Disease
2009	Intra-American Society of Hypertension, Bel Horizonte, Brazil	Local adipose renin-angiotensin system
2011	Vasoactive Peptides International Ouro Preto, Brazil	Angiotensin and Vascular Diseases
2014	Gender in Medicine	Angiotensin and Sexual Dimorphism of the Vasculature
2016	Gordon Research Conference	Women in Science

#### **XIV. Research and/or Creative Productivity**

Research Interests: The focus of research in my laboratory revolves primarily around the existence of an adipose renin-angiotensin system, with emphasis on the functional significance of adipose Angiotensin II (AngII) production. A second research focus in my laboratory is the study of animal models representative of the diseases encompassing the Metabolic Syndrome, including hypertension, obesity, atherosclerosis and abdominal aortic aneurysm formation (AAA). A third research emphasis in my laboratory is the study of the role of AngII in the exacerbation of atherogenic lesions and AAAs. Within these programs, we focus on mechanisms underlying sex differences underlying AAAs and obesity-induced cardiovascular diseases. A fourth research emphasis in my laboratory is the study of polychlorinated biphenyls in obesity, diabetes and cardiovascular diseases.

##### **A. Previously Funded Grants**

1. "The Angiotensinogen-Angiotensin System of Adipose Tissue," R29 First Independent Award, NIH, PI: Lisa Cassis, 12/88 - 11/93, extramural, \$349,615.
2. "Regulation of Angiotensinogen Gene Expression in Adipose Tissue," Basic Science Research Grant (BRSG), NIH, PI: Lisa Cassis, 03/88 - 02/89, intramural, \$5000.
3. "Major Equipment Award," Auto-Gamma 5500 Counter, University of Kentucky Medical Center, PI: Lisa Cassis, 12/88 - 6/88, intramural, \$16,990.
4. "Tissue Specific Regulation of the Angiotensinogen Gene," Pharmaceutical Manufacturer's Association Foundation, PI: Lisa Cassis, 11/88 - 10/89, extramural, \$10,000.
5. "The Renin-Angiotensin System in Streptozotocin Diabetes," University of Kentucky Medical Center Research Grant, PI: Lisa Cassis, 12/88 - 10/89, intramural, \$10,000.

6. "The Renin Angiotensin System in Pulmonary Hypertension," Basic Science Research Grant (BRSG), NIH, PI: Lisa Cassis, 07/89 -06/90, intramural, \$5,000.
7. "Angiotensin in Monocrotaline-induced Pulmonary Hypertension," American Heart Association, Kentucky Affiliate, PI: Lisa Cassis, Co-PI: Mark Gillespie, 07/90 - 06/91, extramural, \$16,909.
8. "Capillary Electrophoresis," Small Instrumentation Grant, NIH, PI: Lisa Cassis, 08/90 - 07/91, extramural, \$9,119.
9. "The Role of Angiotensin in the Neuromodulation of Thermogenesis," University of Kentucky Medical Center Small Research Grant, PI: Lisa Cassis, 12/90 - 11/91, intramural, \$9,960.
10. "DuP 753, a Nonpeptide Angiotensin II-1 Receptor Antagonist, Modulates Dopamine Function in Rat Striatum," DuPont-Merck Pharmaceuticals, Delaware, PI: Lisa Cassis, Co-PI: Linda Dwoskin, 06/01/91 - 05/31/92, extramural, \$15,000.
11. "Major Equipment Award," HPLC System, University of Kentucky Medical Center, PI: Linda Dwoskin, Co-PI: Lisa Cassis, 1/92 - 12/92, intramural, \$16,058.
12. "Oxidized LDL and Atherosclerosis: A Near-infrared Imaging Approach," American Heart Association, Local Kentucky Affiliate, PI: Robert Lodder, Co-PI: Lisa Cassis, 07/92 - 06/94, extramural, \$29,950.
13. "Small Instrumentation Grant," High Performance Liquid Chromatography, National Institutes of Health, PI: Lisa Cassis, 09/92 - 08/93, extramural \$15,879.
14. "Defective Thermogenesis in Zucker Obese Rats: The Role of Angiotensin II," American Heart Association, Local Kentucky Affiliate, PI: Lisa Cassis, 07/01/93 - 06/30/95, extramural, \$12,852.
15. "Angiotensin in Defective Thermogenesis of Obesity", University of Kentucky Medical Small Research Grant, PI: Lisa Cassis, Co-PI: Robert Lodder, 7/01/93- 6/30/94, intramural, \$15,000.
16. "Near-IR Laser for Medical Imaging", NIH, Shared Instrumentation Grant, PI: Robert Lodder, Co-PI: Lisa Cassis, John Carney, Robert Dempsey, Jan Pyrek, David Snowdon, Ed Soltis, 04/01/93 - 03/31/94, extramural, \$125,892.
17. "Limitation of Productivity: Requirement for a -70°C Freezer", PI: Lisa Cassis, co- PI: Linda Dwoskin, 7/01/94 - 6/30/95, intramural, \$6,028.
18. "Dopamine/Angiotensin Interactions in Rat Basal Ganglia", University of Kentucky Medical Small Research Grant, PI: Linda Dwoskin, co-PI: Lisa Cassis, 7/01/94 - 6/30/95, intramural, \$14,210.
19. "Equipment Grant Competition", PI: Lisa Cassis, 7/01/97, intramural, \$10,983.
20. "Angiotensin II in Brown Adipose Tissue Thermogenesis," Research Career Development Award, NIH K04HL02742, PI: Lisa Cassis, 07/92 - 03/97, extramural, \$324,324.
21. "Angiotensin II in Brown Adipose Thermogenesis", R01HL52934-0251, NIH Minority Predoctoral Supplement, PI: Lisa Cassis, co-PI: Victoria King, 10/01/96 - 4/30/99, extramural, \$51,014.
22. "Insulin and Vascular Responsiveness", American Heart Association Local Kentucky Affiliate, PI: L. Cassis, 7/1/95 -6/30/98, extramural, \$29,896.
23. "Angiotensin II in Brown Adipose Thermogenesis", R01HL52934, NIH, PI: Lisa Cassis, 05/01/95 - 04/30/99, extramural, \$314,440.
24. Minority Predoctoral NRSA, NIH, PI: L. Cassis, co-PI: V. King, 05/01/98-04/30/99, extramural, \$12,008.

25. Graduate Center for Toxicology NIH Predoctoral Training Grant, PI: M. Vore, co-PI: L. Cassis, 1996 - .
26. "Ability of AT1 receptor antagonist, losartan, to inhibit Angiotensin II induced atherogenesis and aneurysm formation", Merck & Co., PI: Alan Daugherty, co-PI: L. Cassis, 01/01/00 - 12/31/00, \$44,608.
27. Minority Predoctoral NRSA, NIH, PI: L. Cassis, co-PI: G. Burke, 05/01/98-04/30/03, \$60,040.
28. Angiotensin, Leptin, and the Sympathetic Nervous System, R01 HL52987, NIH, PI: L. Cassis (12%), co-PI: R. Lodder (8%), L. Dwoskin (5%), 07/01/98 - 06/30/03 (no cost extension), \$715,395
29. "The Role of Angiotensin II in Obesity-Induced Hypertension", AHA Ohio Valley Affiliate, Predoctoral fellowship, PI: Carine Boustany, co-PI: L. Cassis, 07/01/02 - 06/30/04, \$34,000.
30. "AngII Promotes Proinflammatory Processes in Atherogenesis", National Institutes of Health R01 HL62846, PI: A. Daugherty (25%), co-PI: L. Cassis (25%), co-PI: J. Pauly (5%), 09/01/2000 - 08/31/04, \$1,330,000.
31. "Data sciences international educational institution telemetry acquisition grant marketing", PI: L. Cassis, 06/01/03 - 12/31/03, \$26,000.
32. "Angiotensin/PPAR interactions in the regulation of adipose mass in diet-induced obesity hypertension", AHA Ohio Valley Affiliate Predoctoral fellowship, PI: Kalyani Bharadwaj, co-PI: L. Cassis, 07/01/03 - 06/30/05, \$36,000.
33. "The role of testosterone and X-linked genes in gender differences in Angiotensin II-induced abdominal aortic aneurysms, AHA Ohio Valley Affiliate Predoctoral fellowship, PI: Tracy Henriques, co-PI: L. Cassis, 07/01/03 - 06/30/05, \$36,000.
34. "Angiotensin/Sympathetic Interactions and Blood Pressure", National Institutes of Health R01 HL64121, PI: L. Cassis (20%), co-PI: D. Randall (15%), D. Brown (30%), 07/01/00 - 06/30/06 (no cost extension), \$1,265,820.
35. "Role of MMPs in AngII Induced Abdominal Aortic Aneurysms", NIH R01 HL70239: PI: A. Daugherty (15%), co-PIs: L. Cassis (10%), Tom Curry (10%), Steve Szilvassy (5%), 04-01-02 - 03-31-07, \$1,801,936.
36. "Efficacy of renin inhibition on the development of atherosclerosis", Novartis Pharmaceuticals, co-PI: L. Cassis, \$160,424, 08/01/05 - 07/31/07.
37. "Role of endothelial AT1a receptors on side stream smoke -induced atherosclerosis", Phillip Morris, co-PI: L. Cassis, \$300,000, 09/01/05 - 08/31/08.
38. "Doctoral Training in Nutrition and Chronic Disease", 2005-02349, USDA Training Grant, PI: L. Cassis, \$207,000, 09/01/2005 - 08/31/2009.
39. "Mechanisms of Abdominal Aortic Aneurysm Formation", NIH PPG, PI: A. Daugherty, co-PI: L. Cassis, \$10,735,557, 04/01/06 - 03/31/12; Project 1: Cassis, PI.
40. "NIH F32 Postdoctoral Grant: PI: S. Thatcher, Mentor: L. Cassis, 02/09 - 01/12.
41. "American Heart Association Predoctoral Grant", PI: K. Putnam, Mentor: L. Cassis, 07/11 - 06/12.
42. "P30 on Fetal Programming in Obesity-Induced Cardiovascular Diseases, NIH, PI: L. Cassis, 09/30/09 - 09/29/13, \$1,110,234.
43. "Sources and Effects of Angiotensin Peptides in Atherosclerosis", NIH R01 HL0628- 06, PI: A. Daugherty, co-PI: L. Cassis, 9/00 - 11/12.
44. "NIH Center of Biomedical Research Excellence on Obesity and Cardiovascular Disease, L. Cassis: Program Director, 09/08 - 08/13, \$10,532,687.

45. "2014 Angiotensin Gordon Research Conference", PI: L. Cassis, NIH R13, 12/1/13 - 04/7/14, \$10,000.
46. "American Heart Association Predoctoral Grant", PI: R. Shoemaker, Mentor: L. Cassis, 7/12 - 6/14.
47. "American Heart Association Predoctoral Grant, PI: W. Yu, Mentor: L. Cassis, 7/14 - 6/15.
48. "Nutrition and Oxidative Stress Training Program", T32 DK07778-06, National Institutes of Health, Multiple PIs: L. Cassis (corresponding PI), \$532,585, 08/01/2004 - 07/31/2015.
49. "American Heart Association Predoctoral Grant, PI: Y. Al-Siraj, Mentor: L. Cassis, 7/14 - 6/16.
50. "American Heart Association Postdoctoral Grant, PI: R. Shoemaker, Mentor: L. Cassis, 12/16 - 12/17, \$98,950.
51. "Center of Biomedical Research Excellence in Obesity and Cardiovascular Disease, NIH COBRE Phase II, PI: L. Cassis, 09/14/13 - 06/30/19 (NCE), \$11,273,081.
52. "Administrative Supplement, NIH Center of Biomedical Research Excellence on Obesity and Cardiovascular Disease", 3P20GM103427-10S1, 08/01/17 - 07/31/18 (NCE), \$342,184.

## **B. Active Grants**

"Angiotensin: A Link Between Obesity and Hypertension", National Institutes of Health, R01 HL073085-10; PI: L. Cassis, 05/01/14 - 04/30/20 (NCE), \$1,542,381.

"Sex differences in angiotensin II-induced vascular diseases", PI: L. Cassis, NIH R01, 09/01/16 - 05/31/20, \$1,667,016.

"NIEHS Superfund Research Program, Project 3, PI: L. Cassis, 04/01/14 - 03/31/20, \$1,603,049.

"NRSA T32: Pharmacology and Nutritional Sciences: Multidisciplinary Approaches, PI: N. Webb, co-PI: L. Cassis, 08/15/00 - 07/31/20, \$862,335.

"American Heart Association Vascular Disease Strategically Focused Research Network", Program Director: A. Daugherty, "Sexual dimorphism of aortopathies", Project PI: L. Cassis, \$1,185,000 (for Cassis project), 1/18 - 12/23.

"Center of Biomedical Research Excellence on Obesity and Cardiovascular Disease", NIH COBRE Phase III, PI: L. Cassis, 04/01/18 - 03/31/23, \$5,737,500.

## **C. Pending Grants**

## **D. Publications**

1. "Neuronal deamination of endogenous and exogenous noradrenaline in the mesenteric artery of the spontaneously hypertensive rat." Head R.J., **Cassis** L.A., Barone S., Stitzel R.E. and de la Lande I.S. *J. Pharm. Pharmacol.* 1984, 36:382-385.

2. "Altered catecholamine contents in vascular and non-vascular tissues in genetically hypertensive rats." Head R.J., **Cassis L.A.**, Robinson R.L., Westfall D.P. and Stitzel R.E. *Blood Vessels* 22:196-204, 1985.
3. "Surgical sympathectomy of the heart in rodents and its effect on sensitivity to agonists." Goto K., Longhurst P.A., **Cassis L.A.**, Head R.J., Taylor D.A., Rice P.J. and Fleming W.W. *J. Pharm. Exp. Ther.*, Vol. 234, 1:280-287, 1985.
4. "The errors introduced by a tritium label in position 8 of catecholamines." Grohmann M., Henseling M., **Cassis L.** and Trendelenburg U. *Nauyn Schmiedeberg's Arch. of Pharm.* 332:34-42, 1986.
5. "Hypernoradrenergic innervation of the caudal artery of the spontaneously hypertensive rat: an influence upon neuroeffector mechanisms." **Cassis L.A.**, Stitzel R.E. and Head R.J. *J. Pharm. Exp. Ther.*, Vol. 234, 3:792-803, 1985.
6. "The effect of partial inhibition of monoamine oxidase on the steady-state rate of deamination of tritiated-catecholamines in two metabolizing systems." **Cassis L.**, Ludwig J. and Trendelenburg U. *Nauyn Schmiedeberg's Arch. Pharm.* 333:253-261, 1986.
7. "The functional coupling of neuronal and extraneuronal transport with intracellular monoamine oxidase". Trendelenburg, U., **Cassis, L.**, Grohmann M., Langeloh A. *J. Neural Transm Suppl* 23:91-101, 1987.
8. "Influence of cold-induced increases in sympathetic nerve activity on norepinephrine content in the vasculature of the spontaneously hypertensive rat." **Cassis L.A.**, Stitzel R.E. and Head R.J. *Blood Vessels* 25:82-88, 1988.
9. "Localization of angiotensinogen messenger RNA in rat aorta." **Cassis L.A.**, Lynch K. and Peach M.J. *Circulation Research* 62:1259-1262, 1988.
10. "Location and regulation of rat angiotensinogen messenger RNA." **Cassis L.A.**, Saye J. and Peach M.J. *Hypertension* 11, No. 6, Part 2, 591-596, 1988.
11. "Fetal expression of the angiotensinogen gene." Gomez R., **Cassis L.**, Lynch K., Chevalier R., Wilfong N., Carey R. and Peach M. *Endocrinology* 123, No. 5:2298-2302, 1988.
12. "Angiotensinogen gene expression in 3T3-L1 cells." Saye J., **Cassis L.**, Sturgill T., Lynch K. and Peach M. *American J. of Physiol.* 256 (Cell Physiol. 25):C448-C451, 1989.
13. "Near infrared spectrometry of living arteries." Lodder R. and **Cassis L.** *Spectroscopy Magazine*, Vol. 5, No. 7, p. 12-16, 1990.
14. "Influence of perivascular adipose tissue on rat aortic smooth muscle responsiveness." Soltis E. and **Cassis L.** *Clin. Exp. Hypertension* A13(2):277-296, 1991.
15. "Down regulation of the renin-angiotensin system in streptozotocin diabetic rats." **Cassis L.** *American J. of Physiol.* 262:E105-E109, 1992.
16. "Presynaptic neuromodulation of neurotransmitter release by endogenous angiotensin II in brown adipose tissue." **Cassis L.** and Dwoskin L. *J. of Neural Transmission* 34:129-138, 1992.
17. "DuP753, a nonpeptide angiotensin II-1 receptor antagonist, modulates dopamine function in the rat striatum." Dwoskin L., Jewell A. and **Cassis L.** *Nauyn Schmiedeberg's Arch. Pharmacol.* 345:153-159, 1992.

18. "Angiotensin II and monocrotaline-induced pulmonary hypertension: Effect of Losartan, a nonpeptide AT1 receptor antagonist." **Cassis L.**, Rippetoe P., Soltis E., Painter D., Fitz R. and Gillespie M. *J. Pharm. Exp. Ther.* 252:1168-1172, 1992.
19. "Acute and chronic effect of Losartan (DuP753) on blood pressure and vascular reactivity in normotensive rats." Soltis E, Jewell A., Dwoskin L. and **Cassis L.** *Clin. Exp. Hyp.*, 15:171-188, 1993.
20. "Near-IR imaging of atheromas in living arterial tissues." **Cassis L.** and Lodder R. *Anal. Chem.* 65:1247-1257, 1993.
21. "Role of angiotensin II in brown adipose thermogenesis during cold acclimation." **Cassis L.** *Amer. J. Physiol.*, 265:E860-E865, 1993.
22. "Angiotensin II in brown adipose tissue from young and adult Zucker obese and lean rats." **Cassis L.** *Amer. J. Physiol.* 266:E453-E458, 1994.
23. "Acute and chronic Losartan administration: effect on angiotensin II content and angiotensin II modulation of [<sup>3</sup>H]norepinephrine release from rat interscapular brown adipose tissue." **Cassis L.** and Dwoskin L. *J. Neural Transmission*, 98:159-164, 1994.
24. "Characterization and Regulation of Angiotensin II Receptors in Rat Adipose Tissue", **Cassis, L.**, Fettinger, M. and Shenoy, U. in *Recent Advances in Cellular and Molecular Aspects of Angiotensin Receptors*, Edited by M. Raizada, Plenum Press, 1996.
25. "Characterization of renin activity in brown adipose tissue, Shenoy, U. and **Cassis, L.** *American Journal of Physiology (Cell Physiology 41)*:C989-C999, 1997.
26. "Lung angiotensin receptor binding characteristics during the development of monocrotaline-induced pulmonary hypertension", **Cassis, L.** Shenoy, U., Lipke, D., Baughn, J., Fettinger, M. and Gillespie, M. *Biochemical Pharmacology*, 54:27-31, 1997.
27. "Near infrared imaging and spectroscopy in stroke research: lipoprotein distributions and disease", Dempsey RJ, **Cassis LA**, Davis DG, Lodder, RA. *Ann. New. York Acad. Sci.*, 820:149-169, 1997.
28. "Near-IR and IR imaging in lipid metabolism and obesity", Robert Buice, **Lisa Cassis** and Robert Lodder, *Cellular and Molecular Biology* 44(1): 53-64, 1998.
29. "Mechanisms contributing to angiotensin II regulation of body weight", **L. Cassis, D. Marshall, M. Fettinger, B. Rosenbluth and R. Lodder**, *American Journal of Physiology* 274: E867 - E876, 1998.
30. "Cold-exposure regulates the renin-angiotensin system", **L. Cassis, A. Laughter, M. Fettinger, V. King, G. Burke and W. Akers**, *J. of Pharm. Exp. Ther.* 286:718-726, 1998.
31. "Cold exposure regulates the norepinephrine uptake transporter in rat brown adipose tissue", V. King, L. Dwoskin and **L. Cassis**, *American Journal of Physiology* 276: R143-R151, 1999.
32. "Facilitation of sympathetic neurotransmission contributes to angiotensin regulation of body weight", V. English and **L. Cassis**, *J. Of Neural Transmission* 106: 631-644, 1999.
33. "Chronic angiotensin II infusion promotes atherogenesis in low density lipoprotein receptor -/- mice", A. Daugherty and **L. Cassis**, *Annals of the New York Academy of Sciences*, Vol 892, p108-118, 1999.
34. "Presynaptic modulation of sympathetic neurotransmission in rat left ventricle slices: effect of pressure overload, S. Akers and **L. Cassis**, *Journal of Neural Transmission*, 107:885 - 902, 2000.

35. "Angiotensin II promotes rapid development of atherosclerotic lesions and aneurysm formation in apolipoprotein E  $-/-$  mice", A. Daugherty and **L. Cassis**, *J. of Clin. Invest.* 105:1605-1612, 2000.
36. "Compensatory activation of the renin-angiotensin system and the sympathetic nervous system in response to pressure-overload", W. Akers, A. Cross, R. Speth, L. Dwoskin and **L. Cassis**, *American Journal of Physiology* 279:H2797-H2806, 2000.
37. "Fat Cell Metabolism: Insulin, Fatty Acids and Renin", **L. Cassis**, *Current Hypertension Reports*, Volume 2, Number 2, pg. 132-138, 2000.
38. "Antagonism of AT<sub>2</sub> receptors augments angiotensin II-induced abdominal aortic aneurysms and atherosclerosis", Alan Daugherty, Michael W. Manning, and **Lisa A. Cassis**, *British Journal of Pharmacology*, 134:865-870, 2001.
39. "Angiotensin II regulates oxygen consumption", **L. Cassis**, M. Helton, V. English and G. Burke, *Amer. J Physiol* 282: R445-R453, 2002.
40. "Mechanisms of Abdominal Aortic Aneurysm Formation", A. Daugherty and **L. Cassis**, *Current Atherosclerosis Reports*, 4:222-227, 2002.
41. "Abdominal Aortic Aneurysms: Fresh Insights From a Novel Animal Model of the Disease", M. Manning, **L. Cassis**, J. Huang, S. Svilassy and A. Daugherty, *Vascular Medicine*, Volume 7, Issue 1, 2002.
42. "Differential Effects of Doxycycline, a Broad Spectrum Inhibitor of Matrix Metalloproteinases, on AngiotensinII-Induced Atherosclerosis and Abdominal Aortic Aneurysm Formation", M. Manning, **L. Cassis** and A. Daugherty, *Atherosclerosis, Thrombosis and Vascular Biology* 23(3): 483-488, 2003.
43. "Aortic Dissection Precedes Formation of Aneurysms and Atherosclerosis in AngII-Infused ApoE Deficient Mice", K. Saraff, F. Babamusta, **L. Cassis**, and A. Daugherty, *Atherosclerosis, Thrombosis and Vascular Biology* 23: 1621- 626, 2003.
44. "Near-Infrared Spectrometry of Abdominal Aortic Aneurysm in the ApoE  $-/-$  Mouse", A. Urbas, M. Manning, A. Daugherty, **L. Cassis** and R. Lodder, *Analytical Chemistry* 75:3650-3655, 2003.
45. "Role of Metabolism and Receptor Responsiveness in the Attenuated Responses of Angiotensin II in Mice Compared to Rats", **L. Cassis**, J. Huang, M. Gong, A. Daugherty, *Regulatory Peptides* 117: 107-116, 2004.
46. "Differential Effects of Autocrine versus Paracrine Angiotensin II in the Regulation of Leptin Release from Adipocytes", **L. Cassis**, V. English, K. Bharadwaj, C. Boustany, *Endocrinology* 145: 169-174, 2004.
47. "Mouse Models of Abdominal Aortic Aneurysms", A. Daugherty and **L. Cassis**. *Atherosclerosis, Thrombosis and Vascular Biology* 24(3): 429-434, 2004.
48. "Presynaptic Modulation of Evoked Norepinephrine Release Contributes to Sympathetic Activation Following Pressure Overload". S. Akers and **L. Cassis**. *Am J Physiol Heart Circ Physiol* 286:H2151-2158, 2004.
49. "Orchiectomy, but not Ovariectomy, Regulates Angiotensin II-Induced Vascular Diseases in Apolipoprotein E Deficient Mice". T. Henriques, J. Huang, A. Daugherty, and **L. Cassis**. *Endocrinology* 145: 3866-3872, 2004.
50. "Angiotensin II-Mediated Development of Vascular Diseases". A. Daugherty and **L. Cassis**, *Trends in Cardiovascular Medicine*, 14:1 - 4, 2004.

51. "Angiotensin II and Abdominal Aortic Aneurysms". Daugherty A, **Cassis, L.** *Current Hypertension Reports* 6: 442-446, 2004.
52. "An Intrarenal Renin-angiotensin System in Autosomal Dominant Polycystic Kidney Disease", M. Adham, C. Soto, T. Inagami, **L. Cassis.** *Am J Physiol* 287:F775-F788, 2004.
53. "Activation of the Systemic and Adipose Renin-Angiotensin System in Rats with Diet-induced Obesity and Hypertension", C. Boustany, K. Bharadwaj, A. Daugherty, D. Brown, D. Randall, **L. Cassis.** *Am J Physiol*, 287:R943-R949, 2004.
54. "Hypercholesterolemia stimulates angiotensin peptide synthesis and contributes to atherosclerosis through the AT1a receptor", A. Daugherty, D. Rateri, H. Lu and **L. Cassis,** *Circulation* 110:3849-3857, 2004.
55. "Aldosterone does not mediate Angiotensin II-induced atherosclerosis and abdominal aortic aneurysms", L. Cassis, V. King, D. Rateri, A. Daugherty, *British Journal of Pharm* 144:443-448, 2005.
56. "Hyperspectral integrated computational imaging", **L. Cassis,** A. Urbas, R. Lodder, *Anal Bioanal Chem* 382: 868-872, 2005.
57. "AT1 receptor antagonism reverses the blood pressure elevation associated with diet-induced obesity", C. Boustany, D. Brown, D. Randall and **L. Cassis,** *Am J Physiol* 289: R181-186, 2005.
58. "Vitamin E inhibits abdominal aortic aneurysm formation in angiotensin II-infused, apolipoprotein E-deficient mice", Gavrilu A, Li WG, McCormick ML, Thomas M., Daugherty A., **Cassis L.,** Miller FJ., Oberley J., Dellsperger KC, Weintraub NL. *Atherosclerosis, Thrombosis and Vasc Biol* 25: 1671-1677, 2006.
59. "Enhanced vascular contractility and diminished coronary artery flow in rats made hypertensive from diet-induced obesity". Boustany-Kari C., Gong M., Akers S., Guo Z., **Cassis L.** *International Journal of Obesity*, 1-8, 2006.
60. "Deletion of p47phox attenuates angiotensin II-induced abdominal aortic aneurysm formation in apolipoprotein E-deficient mice". Thomas M., Gavrilu D., McCormick ML., Miller FJ., Daugherty A., **Cassis L.,** Dellsperger KC., Weintraub NL. *Circulation* 114(5): 404-413, 2006.
61. "Empirical and theoretical analysis of extremely low frequency arterial blood pressure spectrum in unanesthetized rat". Brown DR, **Cassis LA,** Silcox DL, Brown LV, Randall DC. *Amer J Physiol* 291(6):H2816-24, 2006.
62. "Effects of nornicotine enantiomers on intravenous S(-)-nicotine self-administration and cardiovascular function in rats". Stairs DJ, Neugebauer NM, Wei X, Boustany C, Hojahmat M, **Cassis LA,** Crooks P, Dwoskin LP and Bardo MT. *Psychopharmacology* 190(2): 145-55, 2007.
63. "Role of the renin-angiotensin system in the development of abdominal aortic aneurysms in animals and humans". Daugherty A, Rateri D, and **Cassis LA.** *Ann. NY Acad Sci* 1085:82-91, 2006.
64. "Bone marrow transplantation reveals that recipient AT1a receptors are required to initiate AngII-induced atherosclerosis and aneurysms". **Cassis LA,** Rateri D, Lu H, and Daugherty A. *Arteriosclerosis, Thrombosis and Vasc Biology* 27(2): 380-6, 2007.
65. "Angiotensin II increases adipose angiotensinogen expression." Lu H, Boustany-Kari CM, Daugherty A, **Cassis LA.** *Amer J Physiol* 292(5): E1280-7, 2007.

66. "CRP causes downregulation of vascular AT2 receptors and systolic hypertension in mice". Vongpantanasin W, Thomas G, Schwartz R, **Cassis LA**, Osborne-Lawrence S, Hahner L, Gibson LL, Black S, Samols D, Shaul PW. *Circulation* 115:(8): 1020-8, 2007.
67. "Interleukin-4 does not influence development of hypercholesterolemia or angiotensin II-induced atherosclerotic lesions in mice. King VL, **Cassis LA**, Daugherty A. *Am J Pathol* 171:2040-7, 2007.
68. "Atherosclerosis and arterial blood pressure in mice." Lu H, **Cassis LA**, Daugherty A. *Curr Drug Targets* 8:1181-9, 2007.
69. "Commentary. Angiotensin converting enzyme inhibitors and aortic rupture: population based case control study. Daugherty A, **Cassis LA**. *Perspect Vasc Surg Endovasc Ther* 19: 342-4, 2007.
70. "Osteopontin mediates obesity-induced adipose tissue macrophage infiltration and insulin resistance in mice." Nomiyama T, Perez-Tilve D, Ogawa D, Gizard F, Zhao Y, Heywood EB, Jones KL, Kawamori R, **Cassis LA**, Tschop MH, Bruemmer D. *J Clin Invest* 117: 2877-88, 2007.
71. "Local adipose tissue renin-angiotensin system". **Cassis L**, Police S, Yiannikouris Y, Thatcher S. *Current Hypertension Reports* 10: 93-98, 2008.
72. "The role of the renin-angiotensin system in aortic aneurysmal diseases." Lu H, Rateri DL, **Cassis LA**, Daugherty A. *Current Hypertension Reports* 10: 99-106, 2008.
73. "Renin inhibition reduces hypercholesterolemia-induced atherosclerosis in mice." Lu H, Rateri D, Feldman D, Charnigo R, Jukamizu A, Ishida J, Oesterling E, **Cassis LA** (co-corresponding author), Daugherty A. *J Clin Invest* 118(3): 984-993, 2008.
74. "Polychlorinated biphenyl 77 induces adipocyte differentiation and proinflammatory adipokines and promotes obesity and atherosclerosis". Arsenescu V, Arsenescu R, King V, Swanson H, **Cassis L**. *Environmental Health Perspectives* 116(6): 761-768, 2008.
75. "Androgen increases AT1a receptor expression in abdominal aortas to promote angiotensin II-induced AAAs in apolipoprotein E deficient mice". Henriques T, Zhang X, Yiannikouris F, Daugherty A, **Cassis L**. *Arterioscler Thromb Vasc Biol* 28(7):1251-1256, 2008.
76. "ACE2 is expressed in mouse adipocytes and regulated by a high fat diet". Gupte M, Boustany-Kari CM, Bharadwaj K, Police SB, Thatcher S, Gong MC, English VL, **Cassis L**. *Amer J Physiol: Integrat Comp Physiol* 295:R781-8, 2008.
77. "Hypertension and disrupted blood pressure circadian rhythm in type 2 diabetic db/db mice". Su W, Guo Z, Randall D, **Cassis L**, Brown D, Gong M. *Amer J Physiol* 295:H1634-41, 2008.
78. "The adipose renin-angiotensin system: role in cardiovascular disease". Thatcher S, Yiannikouris Y, Gupte M, **Cassis L**. *Molecular and Cellular Endocrinology* 302: 111-17, 2009.
79. "Effects of diets containing sucrose vs D-tagatose in hypercholesterolemic mice." Police SB, Harris JC, Lodder RA, **Cassis LA**. *Obesity* 17:269-275, 2009.
80. "Angiotensin II infusion promotes abdominal aortic aneurysms independent of increased blood pressure in hypercholesterolemic mice." **Cassis LA**, Gupte M, Thayer S, Zhang X, Charnigo R, Howatt DA, Rateri DL, Daugherty A. *Amer J Physiol* 296: H1660-1665, 2009.

81. "Obesity promotes inflammation in periaortic adipose tissue and angiotensin II-induced abdominal aortic aneurysm formation. Police SB, Thatcher SE, Charnigo R, Daugherty A, **Cassis LA**. *Arterioscler Thromb Vasc Biol* 29:1458-1464, 2009.
82. "Augmentation of the renin-angiotensin system by hypercholesterolemia promotes vascular diseases". Daugherty A, Lu H, Rateri D, and **Cassis LA**. *Future Lipidol* 3: 625-636, 2009.
83. "Induction of gene pattern changes associated with dysfunctional lipid metabolism induced by dietary fat and exposure to a persistent organic pollutant." Arzuaga X, Ren N, Stromberg A, Black EP, Arsenescu V, **Cassis LA**, Majkova Z, Toborek M, Hennig B. *Toxicol Lett* 189:96-101, 2009.
84. "Adipokines and blood pressure control." Yiannikouris F, Gupte M, Putnam K, **Cassis LA**. *Current Opinion Nephrol Hypertens* 19:195-200, 2010.
85. "Angiotensin II induces a region-specific hyperplasia of the ascending aorta through regulation of inhibitor of differentiation 3." Owens AP, Subramanian V, Moorelegghen JJ, Guo Z, McNamara CA, **Cassis LA**, Daugherty A. *Circ Res* 106:611-9, 2010.
86. "Angiotensin II infusion promotes ascending aortic aneurysms: attenuation by CCR2 deficiency in apoE<sup>-/-</sup> mice. Daugherty A, Rateri DL, Charo IF, Owens III AP, Howatt DA, **Cassis LA**. *Clin Sci* 118:681-9, 2010.
87. "Genetic variants of the renin angiotensin system: effects on atherosclerosis in experimental models and humans." Daugherty A, Poduri A, Chen X, Lu H, **Cassis LA**. *Curr Atheroscler Rep* 12:167-73, 2010.
88. "Weight loss in obese C57BL/6 mice limits adventitial expansion of established angiotensin II-induced abdominal aortic aneurysms. Police SB, Putnam K, Thatcher SE, Batfoulier-Yiannikouris F, Daugherty A, **Cassis LA**. *Am J Physiol* 298:H1932-8, 2010.
89. "Total lymphocyte deficiency attenuates AngII-induced atherosclerosis in males but not abdominal aortic aneurysms in apoE deficient mice. Uchida HA, Kristo F, Rateri DL, Lu H, Charnigo R, **Cassis LA**, Daugherty A. *Atherosclerosis* 211:399-403, 2010.
90. "The brain renin-angiotensin system controls divergent efferent mechanisms to regulate fluid and energy balance". Grobe JL, Grobe CL, Westphal SG, Morgan DA, Xu D, de Lange WJ, Li H, Sakai K, Thedens DR, **Cassis LA**, Rahmouni K, Mark AL, Johnson AK, Sigmund CD. *Cell Metab* 3:321-42, 2010.
91. "ACE2 deficiency in bone marrow-derived stem cells increases atherosclerosis in LDL receptor <sup>-/-</sup> mice." Thatcher SE, Zhang Z, Howatt DA, Lu H, Gurley SB, Daugherty A, **Cassis LA**. *Arterioscler, Thromb and Vasc Biol* 31:758-65, 2011.
92. "Endothelial cell-specific deficiency of AngII type 1a receptors attenuates AngII-induced ascending aortic aneurysms in LDL receptor <sup>-/-</sup> mice. Rateri DL, Moorlegghen JJ, Balakrishnan A, Owens AP, Howatt DA, Subramanian V, Poduri An, Charnigo R, **Cassis LA**, Daugherty A. *Circ Res* 108:574-81, 2011.
93. "Prolonged infusion of angiotensin II in apoE<sup>-/-</sup> mice promotes macrophage recruitment with continued expansion of abdominal aortic aneurysms". Rateri D, Howatt D, Moorlegghen J, Charnigo R, **Cassis LA**, Daugherty A. *Am J Pathol* 179:1542-8, 2011.
94. "Renal proximal tubule angiotensin type 1a receptors regulate blood pressure". Li W, Weatherford ET, Davis DR, Keen HL, Grobe JL, Daugherty A, **Cassis LA**, Allen AM, Sigmund CD. *Am J Physiol* (epub ahead of print), 2011.
95. "Complex pathologies of angiotensin II-induced abdominal aortic aneurysms." Daugherty A, **Cassis LA**, Lu H. *J Zhejiang Univ Sci B* 12:624-628, 2011.

96. "Urokinase-type plasminogen activator deficiency in bone marrow-derived cells augments rupture of angiotensin II-induced abdominal aortic aneurysms". Uchida HA, Poduri A, Subramanian V, **Cassis LA**, Daugherty A. *Arterio Thromb Vasc Biol* 31:2845-52, 2011.
97. "Polychlorinated biphenyl 77 augments angiotensin II-induced atherosclerosis and abdominal aortic aneurysms in male apolipoprotein E deficient mice". Arsenescu V, Arsenescu R, Parulkar M, Karounos M, Zhang X, **Cassis LA**. *Tox Appl Pharm* 257:148-54, 2011.
98. "MyD88 deficiency attenuates angiotensin II-induced abdominal aortic aneurysm formation independent of signaling through toll-like receptors 2 and 4". Owens AP, Rateri DL, Howatt DA, Moore KJ, Tobias PS, Curtiss LK, Lu H, **Cassis LA**, Daugherty A. *Arterioscler Thromb Vasc Biol* 31:2813-9, 2011.
99. "Molecular and pathophysiological features of angiotensinogen: a mini review." Wu C, Lu H, **Cassis LA**, Daugherty A. *N Am J Med Sci* 4:183-190, 2011.
100. "The renin-angiotensin system: a target of and contributor to dyslipidemias, altered glucose homeostasis and hypertension of the metabolic syndrome". Putnam K, Shoemaker R, Yiannikouris F, **Cassis LA**. *American J Physiol* 302:H1219-30, 2012.
101. "Adipocyte deficiency of angiotensinogen decreases plasma angiotensinogen concentration and systolic blood pressure in mice". Yiannikouris Fy, Karounos M, Charnigo R, English V, Rateri DL, Daugherty A, **Cassis LA**. *American J Physiol* 302:R244-51, 2012. \*, An invited editorial accompanies this article.
102. "Comparative effects of different modes of renin angiotensin system inhibition on hypercholesterolemia-induced atherosclerosis". Ly H, Balakrishnan A, Wu C, Charnigo R, **Cassis LA**, Daugherty A. *British Journal of Pharmacology* 165:2000-8, 2012.
103. "Deficiency of ACE2 in bone marrow-derived cells increases expression of TNF- $\alpha$  in adipose stromal cells and augments glucose intolerance in obese C57BL/6 mice". Thatcher SE, Gupte M, Hatch N, **Cassis LA**. *International Journal of Hypertension*, epub ahead of press, 2012.
104. "Deficiency of receptor-associated protein attenuates angiotensin II-induced atherosclerosis in hypercholesterolemic mice without influencing abdominal aortic aneurysms." Wang S, Subramanian V, Lu H, Howatt DA, Moorleghen JJ, Charnigo R, **Cassis LA**, Daugherty A. *Atherosclerosis* 220: 375-80, 2012.
105. "Differential effects of dietary sodium intake on blood pressure and atherosclerosis in hypercholesterolemic mice". Lu H, Wu C, Howatt DA, Balakrishnan A, Charnigo RJ, **Cassis LA**, Daugherty A. *J Nutritional Biochem*, in press, 2012.
106. "Angiotensin converting enzyme 2 contributes to sex differences in the development of obesity hypertension in C57BL/6 mice". Gupte M, Thatcher SE, Boustany-Kari CM, Shoemaker R, Yiannikouris F, Zhang X, Karounos M, **Cassis LA**. *Arterioscler Thromb Vasc Biol* 32:1392-6, 2012.
107. "Transient exposure of neonatal female mice to testosterone abrogates the sexual dimorphism of abdominal aortic aneurysms". Zhang X, Thatcher SE, Rateri DL, Bruemmer D, Charnigo R, Daugherty A, **Cassis LA**. *Circulation Research* 110:e73-85, 2012.
108. "Deficiency of angiotensin type 1a receptors in adipocytes reduces differentiation and promotes hypertrophy of adipocytes in lean mice". Putnam K, Yiannikouris F, Bharadwaj K, Lewis E, Karounos M, Daugherty A, **Cassis LA**. *Endocrinology* 153:4677-86, 2012.

109. "Coplanar polychlorinated biphenyls impair glucose homeostasis in lean C57BL/6 mice and mitigate beneficial effects of weight loss on glucose homeostasis in obese mice". Baker N, Karounos M, English V, Fang J, Wei Y, Stromberg A, **Cassis LA**. *Environmental Health Perspectives*, in revision, 2012.
110. "Involvement of the renin-angiotensin system in abdominal and thoracic aortic aneurysms." Lu H, Rateri DL, Bruemmer D, **Cassis LA**, Daugherty A. *Clin Sci* 123:531-43, 2012.
111. "Doxycycline does not influence established abdominal aortic aneurysms in angiotensin II-infused mice". Xie X, Lu H, Moorleghen JJ, Howatt DA, Rateri DL, **Cassis LA**, Daugherty A. *Plos One*, in press, 2012.
112. "Novel mechanisms of abdominal aortic aneurysms". Lu H, Rateri DL, Bruemmer D, **Cassis LA**, Daugherty A. *Curr Atheroscler Rep* 14:402-12, 2012.
113. "Regional variation in aortic AT1b receptor mRNA abundance is associated with contractility but unrelated to atherosclerosis and aortic aneurysms". Poduri A, Owens P, Howatt DA, Moorleghen JJ, Balakrishnan A, **Cassis LA**, Daugherty A. *Plos One* 7:e48462, 2012.
114. "Adipocyte deficiency of angiotensinogen prevents obesity-induced hypertension in male mice". Yiannikouris F, **Gupte M, Putnam K, Thatcher S, Charnigo R, Rateri DL, Daugherty A, Cassis LA**. *Hypertension* 6-1524-30, 2012. \*An invited editorial accompanied this publication.
115. "Depletion of endothelial or smooth muscle cell-specific angiotensin II type 1a receptors does not influence aortic aneurysms or atherosclerosis in LDL receptor deficient mice." Rateri DK, Moorleghen JJ, Knight V, Balakrishnan A, Howatt DA, **Cassis LA**, Daugherty A. *PLoS One* 7:e51483, 2012.
116. "Diet-induced obesity: dopamine transporter function, impulsivity and motivation." Narayanaswami V, Thompson AC, **Cassis LA**, Bardo MT, Dwoskin LP. *International Journal of Obesity* 37: 1095-103, 2013.
117. "Coplanar polychlorinated biphenyls impair glucose homeostasis in lean C57BL/6 mice and mitigate beneficial effects of weight loss on glucose homeostasis in obese mice." Baker NA, Karounos M, English V, Fang J, Wei Y, Stromberg A, Sunkara M, Morris AJ, Swanson HI, **Cassis LA**. *Environmental Health Perspectives* 121:105-10, 2013. \*An invited editorial accompanied this publication.
118. "Chronic angiotensin-II treatment potentiates HR slowing in Sprague-Dawley rat during acute behavioral stress". Hoyt RE, Speakman RO, Brown DR, **Cassis LA**, Silcox DL, Anigbogu CN, Randall RC. *Autonomic Neuroscience: Basic and Clinical* 174:42-6, 2013.
119. Chen X, Lu H, Rateri DL, **Cassis LA**, Daugherty A. Conundrum of angiotensin II and TGF- $\beta$  interactions in aortic aneurysms. *Curr Opin Pharmacol* 13:180-5, 2013.
120. Blomkalns AL, Favriola D, Thomas M, Neltner BS, Blanco VM, Benjamin SB, McCormick ML, Stoll LL, Denning GM, Collins SP, Qin Z, Daugherty A, **Cassis LA**, Thompson RW, Weiss RM, Lindower PD, Pinney SM, Chatterjee T, Weintraub NL. CD14 directs adventitial macrophage precursor recruitment: role in early abdominal aortic aneurysm formation. *J Am Heart Assoc* 8:3000065, 2013.
121. Daugherty A, Rateri DL, Howatt DA, Charnigo R, **Cassis LA**. PD123319 augments angiotensin II-induced abdominal aortic aneurysms through an AT2 receptor-independent mechanism. *PloS One* 8:e61849, 2013.
122. Liu S, Xie Z, Daugherty A, **Cassis LA**, Pearson KJ, Gong MC, Guo Z. Mineralocorticoid receptor agonists induce mouse aortic aneurysm formation and rupture in the presence of high salt. *Arterioscler Thromb Vasc Biol* 33:1568-79, 2013.

123. Narayanaswami V, Somkuwar SS, Horton DB, **Cassis LA**, Dwoskin LP. Angiotensin AT1 and AT2 receptor antagonists modulate nicotine-evoked [3H]dopamine and [3H]norepinephrine release. *Biochem Pharmacol* 86:656-65, 2013.
124. Chen X, Lu H, Zhao M, Tashiro K, **Cassis LA**, Daugherty A. Contributions of leukocyte angiotensin-converting enzyme to development of atherosclerosis. *Arterioscler Thromb Vasc Biol* 33:2075-80, 2013.
125. Baker NA, English V, Sunkara M, Morris AJ, Pearson KJ, **Cassis LA**. Resveratrol protects against polychlorinated biphenyl-mediated impairment of glucose homeostasis in adipocytes. *J Nutr Biochem* 24:2168-74, 2013.
126. Kramer SP, Powell DK, Haggerty CM, Binkley CM, Mattingly AC, **Cassis LA**, Epstein FH, Fornwalt BK. Obesity reduces left ventricular strains, torsion, and synchrony in mouse models: a cine displacement encoding with stimulates echoes (DENSE) cardiovascular magnetic resonance study. *J Cardiovasc Magn Reson* 31:15, 109, 2013.
127. Chen X, Rateri DL, Howatt DA, Balakrishnan A, Moorlegghen JJ, Morris AJ, Charnigo R, **Cassis LA**, Daugherty A. Amlodipine reduces AngII-induced aortic aneurysms and atherosclerosis in hypercholesterolemic mice. *PLoS One* 14:e81743, 2013.
128. King VL, English VL, Bharadwaj K, **Cassis LA**. Angiotensin II increases sympathetic neurotransmission to adipose tissue. *Physiological Reports* 1: dio: 10, 2014.
129. Zhang X, Thatcher S, Wu C, Daugherty A, **Cassis LA**. Castration of male mice prevents the progression of established angiotensin II-induced abdominal aortic aneurysms. *J Vasc Surg* S0741-5214, 2014.
130. Rateri D, Davis F, Balakrishnan A, Howatt D, Moorlegghen J, O'Connor W, Charnigo R, **Cassis LA**, Daugherty A. Angiotensin II induces region-specific medial disruption during evolution of ascending aortic aneurysms. *Am J Pathol* 184:2586-95, 2014.
131. Thatcher SE, Zhang Z, Howatt DA, Yiannikouris Y, Gurley SB, Ennis T, Curci JA, Daugherty A, **Cassis LA**. ACE2 decreases formation and severity of angiotensin II-induced abdominal aortic aneurysms. *Arterioscler Thrombosis Vasc Biol* 34:2617-23, 2014.
132. Davis FM, Rateri DL, Balakrishnan A, Howatt DA, Strickland DK, Muratoglu SC, Haggerty CM, Fornwalt BK, **Cassis LA**, Daugherty A. Smooth muscle cell deletion of low-density lipoprotein receptor-related protein 1 augments angiotensin II-induced superior mesenteric arterial and ascending aortic aneurysms. *Arterioscler Thromb Vasc Biol* 35:155-62, 2015.
133. Baker NA, English V, Larian N, Shoemaker R, Sunkara M, Morris AJ, Walker M, Yiannikouris F, **Cassis LA**. Effects of adipocyte aryl hydrocarbon deficiency on PCB-induced disruption of glucose homeostasis in lean and obese mice. *Environ Health Perspectives* 123:944-50, 2015.
134. Wu C, Xu Y, Lu H, Howatt DA, Balakrishnan A, Moorlegghen JJ, Vander Kooi CW, **Cassis LA**, Wang JA, Daugherty A. Cys18-Cys137 disulfide bond in mouse angiotensinogen does not affect AngII-dependent functions in vivo. *Hypertension* 65:800-5, 2015.
135. Wang Y, Shoemaker R, Thatcher SE, Batifoulier-Yiannikouris F, English VL, **Cassis LA**. Administration of 17 $\beta$ -estradiol to ovariectomized obese female mice reverses obesity-hypertension through an ACE2-dependent mechanism. *Am J Physiol Endocrinol Metab* 308: E1066-75, 2015.
136. Liu J, Lu H, Howatt DD, Balakrishnan A, Moorlegghen J, Thomas MS, **Cassis LA**, Daugherty A. Associations of ApoA1 and ApoB-containing lipoproteins with AngII-induced abdominal aortic aneurysms in mice. *Arterioscler Thromb Vasc Biol* 35:1826-34, 2015.

137. Thatcher SE, Zhang X, Woody S, Wang Y, Alsiraj Y, Charnigo R, Daugherty A, **Cassis LA**. Exogenous 17- $\beta$ -estradiol administration blunts progression of established angiotensin II-induced abdominal aortic aneurysms in female ovariectomized mice. *Biol Sex Diff* 29: 13293-015-0030, ecollection, 2015.
138. Poduri A, Rateri DL, Howatt DA, Balakrishnan A, Moorlegghen JJ, **Cassis LA**, Daugherty A. Fibroblast angiotensin II type 1a receptors contribute to angiotensin II-induced medial hyperplasia in the ascending aorta. *Arterioscler Thromb Vasc Biol* 35:1995-2002, 2015.
139. Yiannikouris F, Wang Y, Shoemaker R, Larian N, Thompson J, English VL, Charnigo R, Su W, Gong M, **Cassis LA**. Deficiency of angiotensinogen in hepatocytes markedly decreases blood pressure in lean and obese male mice. *Hypertension* 66:836-42, 2015.
140. Shoemaker R, Yiannikouris F, Thatcher S, **Cassis L**. ACE2 deficiency reduces  $\beta$ -cell mass and impairs  $\beta$ -cell proliferation in obese C57BL/6 mice. *Am J Physiol* 309: E621-31, 2015.
141. Lu H, Howatt DA, Balakrishnan A, Moorlegghen JJ, Rateri DL, **Cassis LA**, Daugherty A. Subcutaneous angiotensin II infusion using osmotic pumps induces aortic aneurysms in mice. *J Vis Exp* 28:10.3791/53191, 2015.
142. Lu H, Wu C, Howatt DA, Balakrishnan A, Moorlegghen JJ, Chen X, Zhao M, Graham MJ, Mullick AE, Crooke RM, Feldman DL, **Cassis LA**, Vander Kooi CW, Daugherty A. Angiotensinogen exerts effects independent of angiotensin II. *Arterioscler Thromb Vasc Biol* 36:256-65, 2016.
143. Pati P, Fulton DJ, Bagi Z, Chen F, Wang Y, Kitchens J, **Cassis LA**, Stepp DW, Rudic RD. Low-salt diet and circadian dysfunction synergize to induce angiotensin II-dependent hypertension in mice. *Hypertension* 67:661-8, 2016.
144. Chen X, Rateri DL, Howatt DA, Balakrishnan A, Moorlegghen JJ, **Cassis LA**, Daugherty A. TGF- $\beta$  neutralization enhances AngII-induced aortic rupture and aneurysm in both thoracic and abdominal regions. *PLoS One* 11:e0153811, 2016.
145. Chen X, Howatt DA, Balakrishnan A, Moorlegghen JJ, Wu C, **Cassis LA**, Daugherty A, Lu H. Angiotensin converting enzyme in smooth muscle cells promotes atherosclerosis. *Arterioscler Thromb Vasc Biol* 36:1085-9, 2016.
146. Lu H, **Cassis LA**, Kooi CW, Daugherty A. Structure and function of angiotensinogen. *Hypertens Res* 39:492-500, 2016.
147. Li J, Song J, Zaytseva YY, Liu Y, Rychahou P, Jiang K, Starr ME, Kim JT, Harris JW, Yiannikouris FB, Katz WS, Nilsson PM, Orho-Melander M, Chen J, Zhu H, Fahrenholz T, Higashi RM, Gao T, Morris AJ, **Cassis LA**, Fan TW, Weiss HL, Dobner PR, Melander O, Jia J, Evers BM. An obligatory role for neurotensin in high-fat-diet-induced obesity. *Nature* 533:411-5, 2016.
148. Wang Y, Shoemaker R, Powell D, Su W, Thatcher SE, **Cassis LA**. Differential effects of Mas receptor deficiency on cardiac function and blood pressure in obese male and female mice. *Am J Physiol Heart Circ* 312:H459-H468, 2017.
149. Vasam G, Joshi S, Thatcher SE, Bartelmez SH, **Cassis LA**, Jarajapu YP. Reversal of bone marrow mobilopathy and enhanced vascular repair by angiotensin-(1-7) in diabetes. *Diabetes* 66:505-518, 2017.
150. Jackson E, Shoemaker R, Larian N, **Cassis LA**. Adipose tissue as a site of toxin accumulation. *Comprehensive Physiology* 7:1085-1135, 2017.

151. Al-Siraj Y, Thatcher SE, Charnigo R, Chen K, Blalock E, Daugherty A, **Cassis LA**. Female mice with an XY sex chromosome complement develop severe angiotensin II-induced abdominal aortic aneurysms. *Circulation* 135:379-391, 2017.
152. Arnold AP, **Cassis LA**, Eghbali M, Reue K, Sandberg K. Sex hormones and sex chromosomes cause sex differences in the development of cardiovascular diseases. *Arterioscler Thromb Vasc Biol* 37:746-756, 2017.
153. Wang Y, Thatcher SE, **Cassis LA**. Blood pressure monitoring using radiotelemetry in mice. *Methods Mol Biol* 1614:75-85, 2017.
154. Wang Y, Thatcher SE, **Cassis LA**. Measuring blood pressure using a noninvasive tail cuff method in mice. *Methods Mol Biol* 1614:69-73, 2017.
155. Wang Y, **Cassis LA**, Thatcher SE. Use of a fluorescent substrate to measure ACE2 activity in the mouse abdominal aorta. *Methods Mol Biol* 1614:61-67, 2017.
156. Kim HW, Blomkalns AL, Ogbi M, Thomas M, Gavrila D, Neltner BS, **Cassis LA**, Thompson RW, Weiss RM, Lindower PD, Blanco VM, McCormick ML, Daugherty A, Fu X, Hazen SL, Stansfield BK, Huo Y, Fulton DJR, Chatterjee T, Weintraub NL. Role of myeloperoxidase in abdominal aortic aneurysm formation: mitigation by taurine. *Am J Physiol* 313:H1168-1179, 2017.
157. Alsiraj A, Thatcher SE, Blalock E, Fleenor B, Daugherty A, **Cassis LA**. Sex chromosome complement defines diffuse versus focal angiotensin II-induced aortic pathology. *Arterioscler Thromb Vasc Biol* 38:143-153, 2018.
158. Robinet P, Milewicz DM, **Cassis LA**, Leeper NJ, Lu HS, Smith JD. Consideration of sex differences in design and reporting of experimental arterial pathology studies-statement from ATVB Council. *Arterioscler Thromb Vasc Biol* 38:292-303, 2018.
159. Stegbauer J, Thatcher SE, Yang G, Bottermann K, Rump LC, Daugherty A, **Cassis LA**. Mas receptor deficiency augments angiotensin II-induced atherosclerosis and aortic aneurysm ruptures in hypercholesterolemic mice. *J Vasc Surg* , pii: S0741-5214(19)3027-2, 2019.
160. Shoemaker R, AlSiraj Y, Chen J, **Cassis L**. Pancreatic AT1aR deficiency decreases insulin secretion in obese C57BL/6 mice. *Am J Hypertens* 9:597-604, 2019.
161. AlSiraj Y, Chen X, Thatcher SE, Temel RE, Cai L, Blalock E, Katz W, Ali HM, Petriello M, Deng P, Morris AJ, Wang X, Lusis AJ, Arnold AP, Reue K, Thompson K, Tso P, **Cassis LA**. XX sex chromosome complement promotes atherosclerosis in mice. *Nature Communications* 10:2631, 2019.
162. Larian N, Ensor M, Thatcher SE, English V, Morris AJ, Stromberg A, **Cassis LA**. Pseudomonas aeruginosa-derived pyocyanin reduces adipocyte differentiation, body weight, and fat mass as mechanisms contributing to septic cachexia. *Food and Chemical Toxicology* 130:219-230, 2019.
163. Jackson E, Thatcher SE, Larian N, English V, Soman S, Morris AJ, Weng J, Stromberg A, Swanson HI, Pearson K, **Cassis LA**. Effects of aryl hydrocarbon receptor deficiency on PCB77-induced impairment of glucose homeostasis during weight loss in male and female obese mice. *Environ Health Perspect* 127:77004, 2019.

## E. Chapters in Books

"Mechanisms of Adenosine- and ATP-induced Relaxation in Rabbit Femoral Artery: Role of Endothelium and Cyclic Nucleotides." **Cassis L.A.**, Loeb A.L. and Peach M.J. Presented at the International Adenosine Symposium in Munich, *Topics and Perspectives in Adenosine Research*, edited by E. Gerlach and B. Becker, pp. 486-499, 1986.

"Near-IR Imaging of Atheromas in Living Arterial Tissue." **Cassis L.** and Lodder R. *Scientific Excellence in Supercomputing*, Volume 2, edited by K. Billingsley, H. Brown and E. Derohanes, 1992.

"Vasoactive Substances: Renin, Angiotensin and Kinins." **Cassis L.A.** in *Modern Pharmacology*, 4<sup>th</sup> edition, edited by C. Craig and R. Stitzel, Little Brown and Company, 1993.

"Vasoactive Substances: Renin, Angiotensin and Kinins." **Cassis L.A.** in *Modern Pharmacology*, 5<sup>th</sup> edition, edited by C. Craig and R. Stitzel, Little Brown and Company, 1995.

"Vasoactive Substances: Renin, Angiotensin and Kinins." **Cassis L.A.** in *Modern Pharmacology*, 6<sup>th</sup> edition, edited by C. Craig and R. Stitzel, Little Brown and Company, 2003.

"AngiotensinII-induced aortic aneurysms." Wang YX, **Cassis LA**, Daugherty A. Pg. 125-146. In: A Handbook of mouse models of cardiovascular disease. Ed. Q Xu. Wiley, 2006.

"Vasoactive Substances: Renin, Angiotensin and Kinins." **Cassis LA.** In *Modern Pharmacology*, 7<sup>th</sup> edition, edited by C. Craig, Little Brown and Company, 2008.

"Antihypertensive Drugs." **Cassis LA.** In *Modern Pharmacology*, 7th edition, edited by C. Craig, Little Brown and Company, 2008.

"Adipose tissue and blood pressure regulation". **Cassis LA**, Police SB. In *Adipose Tissue in Health and Disease*, John Wiley and Sons Company, 2009.

## F. Patents

Robert A. Lodder and Lisa A. Cassis, "Apparatus and Method for Analyzing Tissue", U.S. Patent Application Serial Number 945,202 filed Sept. 15, 1992.